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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/057,838	04/09/1998	ANTONY P. VAN DE VEN	5308-79DV	6831

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EXAMINER

WU, XIAO MIN

ART UNIT PAPER NUMBER

2629

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/057,838

Applicant(s)

VAN DE VEN ET AL.

Examiner

XIAO M. WU

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-29,31-43,49-53 and 64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 42,49-53 and 63 is/are allowed.
- 6) ☒ Claim(s) 17-27,29,31-41,43,55-62 and 64 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/2/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn as indicated in the advisory action dated 6/1/2005.

2. The indicated allowability of claims 17-27, 29, 31-41, 43, 55-62 and 64 is withdrawn in view of the newly discovered reference(s) to Norman et al. (US Patent No. 5,383,350).

Rejections based on the newly cited reference(s) follow.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 17-27, 31-41 and 55-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 5,184,114) in view of Norman et al. (US Patent No. 5,583,350).

As to claims 17, 22-23, 31-33, 55-57, Brown discloses a pixel comprising: a light emitting diode (18, Fig. 13) that emits in the blue region of the visible spectrum (25B, Fig. 13); a light emitting diode (18) that emits in the green region (25G, Fig. 13) of the visible spectrum and adjacent the blue LED; a light emitting diode (18) that emits in the red region (25R) of the visible spectrum, and adjacent to the blue LED and the green LED and a light emitting diode that emits in the red region of the visible spectrum, and adjacent to the blue LED and the green LED, the red LED. Brown further discloses that the red LED having its respective top anode contact in substantially the same plane as the anode contacts of the blue LED and the green LED (see Fig. 13). It is noted that Brown does not specifically disclose that the red LED including at least one active layer of aluminum gallium arsenide (AlGaAs) as required in claim 17, and the LED having blue or green light emitting diode comprising a silicon carbide substrate and a group III nitride active layer as required in claim 31 and 55, respectively.

Norman is cited to teach a LED device in which the red LED including at least one active layer of aluminum gallium arsenide (AlGaAs) and the blue or green light emitting diode comprising a silicon carbide substrate and a group III nitride active layer (col. 5, lines 3-22 and 36-55). It would have been obvious to one of ordinary skill in the art to have modified Brown with the features of the blue LED structure as taught by Norman because Norman provide a full color light emitting display that has red, blue, and green LEDs that have peaks in the desirable ranges in order to provide full color images (see col. 1, lines 36-39).

As to claims 18-19, 34, 58, Brown discloses the LEDs comprise respective bottom contacts, and wherein said bottom contacts are in a substantially common plane different from

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the common plane of the top contact (e.g. row and column as shown in Fig. 9). Brown further discloses a anode contact pin (see Fig. 6).

As to claims 21, 35, 59, Norman discloses group III nitride active layer comprising gallium (col. 5, lines 3-22 and 36-55).

As to claims 20, 36, 37, 60, 61, Norman discloses that the green LED comprises a silicon carbide substrate and a group III (e.g. gallium) nitride active layer (col. 5, lines 3-22 and 36-55).

As to claims 24-26, 38, 39-40, Norman discloses that the green LED comprises a gallium phosphide (col. 5, lines 3-22 and 36-55).

As to claims 27, 41, 62, it is inherent to apply different voltage to the red, green and blue LEDs according to the display data.

6. Claims 29, 43 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 5,184,114) in view of Norman et al. (US Patent No. 5,583,350) as applied to claims 17-27, 1-41 and 55-62 above, and further in view of Brown et al. (US Patent No. 5,583,351).

As to claims 29, 43, 64, it is noted that Brown ('114) and Norman do not specifically disclose that the values of the emission wavelengths are usually to satisfy the CIE chromaticity diagram. Brown ('351) is cited to teach a LED display device similar to Brown ('114) and Norman. Brown ('351) further discloses the values of the emission wavelengths are usually to satisfy the CIE chromaticity diagram in order to produce a good "white" color (col. 9, lines 64-67). It would have been obvious to one ordinary skill in the art to have modified Brown ('114) and Norman with the features of the values of the emission wavelengths chosen to satisfy the CIE chromaticity in order to produce a good "white" color.

Allowable Subject Matter

1. Claims 42 and 63 are allowed.
2. Claim 28 is are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571-272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD HJERPE, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

x.w.

September 30, 200


XIAO M. WU
Supervisory Patent Examiner
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